BY THE COMPTROLLER GENERAL

# Report To The Congress

OF THE UNITED STATES



## Stronger Federal Direction Needed To Promote Better Use Of Present Urban Transportation Systems

In 1975, the Federal Highway Administration and the Urban Mass Transportation Administration jointly issued regulations requiring urban areas to develop short-range transportation plans aimed at making better use of present urban transportation systems.

The regulations, however, have not been as effective as they could have been because:

--The two Federal agencies have not administered the regulations consistently.

--Urban areas have not been able to institute planning processes that result in unified plans.

--Projects that have the most potential for improving the efficiency of existing transportation systems have not been widely adopted.

The Secretary of Transportation needs to strengthen Federal administration of the regulations.



CED-79-126
OCTOBER 4, 1979

COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-180617

To the President of the Senate and the
Speaker of the House of Representatives

This report discusses how the Department of Transportation promotes better use of our Nation's existing urban highways and public transit systems through its urban transportation planning regulations and how urban areas have been carrying out those regulations. It addresses what the Department of Transportation could do to improve its administration of the urban transportation planning requirements.

We are sending copies of this report to the Director, Office of Management and Budget; the Secretary of Transportation; interested congressional committees; and other parties.

Comptroller General
of the United States

COMPTROLLER GENERAL'S REPORT TO THE CONGRESS

# STRONGER FEDERAL DIRECTION NEEDED TO PROMOTE BETTER USE OF PRESENT URBAN TRANSPORTATION SYSTEMS

## D I G E S T

Since fiscal year 1976, the Congress has provided approximately $18 billion for improvements to ease and control traffic flow on the Nation's highways, preserve and revitalize mass transit systems, and improve the efficiency of transit operations. States and urban areas have used these funds primarily to construct highways; to purchase new equipment and facilities, such as buses and railcars; and to provide transit operating assistance.

To encourage better use of existing highway and public transit systems, the Federal Highway Administration and the Urban Mass Transportation Administration issued joint planning regulations in 1975, requiring urban areas to develop transportation systems management (short-range) plans. These plans are to be the product of a coordinated planning process in which automobiles, public transit, taxis, pedestrians, and bicycles are treated as elements of an integrated transportation system.

In developing these plans, urban areas are to consider a wide range of projects, such as preferential treatment for transit and other high-occupancy vehicles, progressive timing of traffic signals, and establishment of pricing mechanisms to reduce vehicle use in congested areas. The regulations have resulted in urban areas' giving more emphasis to short-range, low-cost solutions to transportation problems but have not resulted in integrated urban transportation system plans nor in the widespread adoption of projects different from those implemented prior to the regulations. The reasons follow.





### NO JOINT FEDERAL ADMINISTRATION

The Highway Administration and the Mass Transportation Administration administer the regulations separately, do not always agree on the regulations' scope, and do not enforce the requirements consistently. Urban areas are required to submit one plan for highways and transit.

However, separate Highway and Mass Transportation Administration reviews do not facilitate integration of urban transportation plans.

There is no one interpretation of what transportation systems management is. As a result, Federal, State, and local transportation officials are not sure what kinds of projects can or should be considered in the plans. For instance, some officials believe that all improvements including route expansions and bus purchases, should be considered while others believe projects should be limited to certain types of actions, such as marketing and management improvements. The Highway Administration believes transportation systems management cannot be further defined, and the Mass Transportation Administration believes a more specific definition might stifle innovation.

Also, Federal officials believe that urban areas should establish measurable objectives so that the benefits of projects implemented and progress in attaining goals can be assessed. However, neither Federal agency has required measurable objectives to be established, and most urban areas have not established them. (See ch. 3.)

It is unlikely that maximum efficiency of an urban area's transportation system will result unless there is common agreement on what transportation systems management is, what is required, and how it is to be administered. Therefore, the Secretary of Transportation should:

--Require the Highway and Mass Transportation Administrations to reach agreement on the regulations' scope and requirements.

--Integrate the Department's administration of the planning and review functions by (1) providing State and local officials with consistent direction and (2) reviewing the planning processes in urban areas from a total transportation system perspective.

--Require the Highway and Mass Transportation Administrations to work with State and local officials in developing measurable urban transportation objectives aimed at improving existing urban transportation resources. (See p. 21.)

## PLANNING PROCESSES NOT FULLY COORDINATED

Metropolitan planning organizations, a forum for cooperative decisionmaking by local elected officials, are responsible for coordinating the development of integrated urban transportation plans. However, these organizations have not carried out this responsibility primarily because they do not have sufficient programing and budgeting authority. Most of them have not established a framework in which coordinated development of their plans can take place. Therefore, most urban area plans continue to be developed independently by each local agency.

In addition, there are usually no organized groups at the local level to advocate transportation systems management projects; and many groups, such as police, taxi operators, merchants, and employers, whose support is needed to implement these projects successfully, are not included regularly in the planning process.

The Highway and Mass Transportation Administrations have approved urban planning processes even though they are not fully coordinated. (See ch. 4.)

To promote coordination of the planning process, the Secretary of Transportation should require that the Highway and Mass Transportation Administrations not approve an urban area's planning process until it has shown that the plan (1) is an overall unified one resulting from a coordinated process and (2) includes input from those groups or agencies that can contribute to the planning process. (See p. 31.)

## FEDERAL FUNDS NOT USED FOR INNOVATIVE PROJECTS

Federal funds have not been increased or set aside to encourage urban areas to implement regional transportation systems management projects, including innovative ones such as elimination of onstreet parking, increased parking charges, and staggering of work hours.

Local officials prefer to use Federal funds for traditional projects, such as transit operating assistance and highway construction,

even though the funds can be used for both innovative and traditional ones. (See p. 35.)

Part of the Urban Mass Transportation Administration's discretionary grant program funds can be used to support innovative mass transit projects. However, the Department of Transportation has not requested appropriations for this. Even if funds were provided, additional legislative authority may be needed to provide incentives for innovative projects that involve more than transit. (See p. 33.)

The Secretary of Transportation should request funds to test whether Federal financial incentives would help promote more widespread adoption of innovative projects and then determine need for additional legislative authority. (See p. 44.)

AGENCY COMMENTS

The Department of Transportation generally agreed with GAO's conclusions and recommendations. It believed, however, that the report did not reflect adequately the positive effects of the regulations and the variations in local political structures and intergovernmental relations that had to be considered in developing the regulations.

The Department said that the shift from the previous almost exclusive focus on long-range to short-range planning by urban areas has had a positive effect. GAO agrees that urban areas are now placing more emphasis on short-range solutions to their transportation problems, but the regulations have not resulted in integrated plans or wide adoption of innovative projects.

The Department also said that the report did not fully recognize the subtleties of the planning requirements and the framework in which the joint planning regulations were developed. The Department should be commended for its efforts in promulgating the regulations. However, potential benefits will not be realized unless the Department takes additional steps to make certain that urban areas carry out the regulations more fully.

# Contents

## ABBREVIATIONS

| | |
|---|---|
| EPA | Environmental Protection Agency |
| FHWA | Federal Highway Administration |
| GAO | General Accounting Office |
| MPO | metropolitan planning organization |
| TSM | transportation systems management |
| UMTA | Urban Mass Transportation Administration |

# CHAPTER 1

## INTRODUCTION

Highway and urban mass transportation legislation enacted in the last decade has emphasized the need for improved transportation systems in urban areas. Through its appropriations to the Department of Transportation's Federal Highway Administration (FHWA) and Urban Mass Transportation Administration (UMTA), the Congress has provided funds for improvements to facilitate and control traffic flow on the Nation's highways, preserve and revitalize mass transit systems, and improve the efficiency of transit operations. Since fiscal year 1976, FHWA and UMTA have provided approximately $18 billion to urbanized areas 1/ for transit equipment and facilities such as bus and railcar purchases, transit operating assistance, and major highway construction.

Traditionally, urban areas have primarily relied on transportation projects for construction or purchase of new facilities and equipment that are costly and require long leadtimes to solve their transportation problems. In recent years, however, alternatives to these types of projects have been necessary because (1) the cost of new equipment and facilities has increased at a faster rate than the funds available to support their development and (2) the construction or purchase of new facilities and equipment to achieve urban mobility goals often was inconsistent with other national goals of improving environmental quality, conserving energy, and providing for orderly urban growth. Department of Transportation officials also believed that some of the mobility problems being experienced in many urban areas were not caused by too little capacity but rather by inefficiently used facilities and services. These factors led to the development of the current short-range planning requirements for urban areas.

## THE JOINT PLANNING REGULATIONS

Both Federal highway and urban mass transit legislation require urban areas to establish a transportation planning process. Under this authority, FHWA and UMTA jointly issued regulations (23 CFR 450 and 49 CFR 613) in September 1975 governing the transportation planning process in urbanized areas. The regulations were designed to improve and strengthen metropolitan transportation planning. These regulations required each urban area to develop a single

---

1/Urbanized areas are areas of more than 50,000 population. For the purpose of this report, urbanized areas will be referred to as urban areas.

transportation plan for highways and transit that included consideration of actions integrating automobiles, public transit, taxis, pedestrians, and bicycles. The regulations also made UMTA and FHWA urban transportation planning requirements consistent.

A transportation plan has a long-range and short-range component. The short-range component is called transportation systems management (TSM) and is supposed to identify improvements that would result in more efficient use of the existing transportation facilities. TSM was included to provide better balance in the transportation planning and implementation process between the construction of major facilities intended to benefit urban areas in the distant future and improvements in transportation service which could bring about almost immediate benefits.

In developing the TSM plan, urban areas are required to consider a wide range of operating, regulatory, and service policies. The TSM plan is aimed at coordinating automobiles, public transit, taxis, pedestrians, and bicycles to improve the system as a whole. The regulations require that planning be a regional process that treats highways and transit as elements of a single, integrated transportation system. (A listing of what FHWA and UMTA consider representative of of TSM actions is shown in app. I.)

The regulations assigned responsibility for coordinating the planning process on a regional level to each metropolitan planning organization (MPO) 1/ in cooperation with the State and publicly owned operators of mass transportation services. This responsibility included developing both the long-range and TSM (short-range) components of the transportation plan.

The TSM planning process should be a continuous, intermodal 2/ approach to solving short-range problems of the

---

1/The MPO, designated by the Governor of each State, is a forum for cooperative decisionmaking consisting of principal elected officials of the general purpose local governments in the urban area.

2/Intermodal, as defined in our report "Making Future Transportation Decisions: Intermodal Planning Needed," (CED-78-74, Mar. 16, 1978) is the serious examination of trade-off and interactions between competing and complementary transportation modes. This differs from multimodal planning which examines a number of modes independently, with little or no consideration of the trade-off or interactions.

existing transportation system. According to the regulations, planning should be a cooperative process including representatives from all groups and agencies which provide or are affected by transportation services. These agencies should be involved in all phases of the TSM planning process, including identifying problems, developing alternatives, and implementing projects.

The projects, or combination of projects, planned and implemented depend on the needs and resources available in the specific urban area. The regulations state, however, that controlling the flow of traffic; influencing the volume, pattern, and mix of traffic; and giving priority to buses and other high-occupancy vehicles may be the single most effective ways to improve efficiency and productivity of the entire transportation system. Such projects may include

--selectively curtailing the use of low-occupancy cars through parking restrictions, increased peak-hour tolls and incentives for carpools;

--reserving lanes to speed up buses and other high-occupancy vehicles; and

--encouraging greater offpeak use of transit facilities.

Although the regulations require urban areas to consider such projects, local areas decide which projects to implement. FHWA and UMTA neither specify what projects urban areas must implement nor prescribe any specific targets they must attain.

DOT officials said that they would like to see urban areas give priority to TSM projects in developing their programing documents, a listing of projects to be implemented within the next 5 years. The regulations require that TSM projects selected for implementation be included in the programing document, thus recognizing the relationship between planning and programing. UMTA requires that all urban areas with 200,000 or more population develop TSM plans and include TSM projects in the annual update of their programing document as a condition of UMTA program approval. UMTA also requires that urban areas demonstrate reasonable progress in implementing planned TSM projects.

UMTA and FHWA are required to review and evaluate annually the transportation planning process in each urban area to determine if the process meets planning requirements. If no TSM plan is found to exist or if the preplan analysis is unsatisfactory, UMTA and FHWA can deny

the area's planning certification until specific corrective actions are taken. Without certification, urban areas are not eligible to receive UMTA and FHWA capital and operating funds.

From fiscal year 1976 through fiscal year 1979, FHWA has provided urban areas $115 million and UMTA has provided $191 million--a total of $306 million--for TSM and long-range planning purposes. TSM project implementation is funded primarily with UMTA discretionary and formula grant funds or with Federal-aid highway funds (urban system, primary and interstate).

## SCOPE OF REVIEW

We assessed the status of and problems with Federal efforts to improve the use of existing urban transportation resources through the TSM concept, and we analyzed urban TSM planning and programing. We focused on transportation planning activities at the Federal, State, and local levels and federally conducted or funded reviews of TSM.

We interviewed officials and reviewed documents at Federal, State, and local offices. We discussed our work with internal auditors of the U.S. Department of Transportation and reviewed their audit reports, but these reports were not considered germane to our review. We also interviewed transportation experts and reviewed documents at universities involved in transportation research and evaluation including Department of Transportation-sponsored TSM research. Our review was conducted at the headquarters offices of the U.S. Department of Transportation, including the Office of the Secretary, Federal Highway Administration, and the Urban Mass Transportation Administration; the Environmental Protection Agency; and the Department of Energy. Our fieldwork was conducted in Los Angeles and San Diego, California; Phoenix, Arizonia; Albuquerque, New Mexico; Dallas-Ft. Worth, Texas; and Pittsburgh and Philadelphia, Pennsylvania. Fieldwork was also conducted at the State transportation agencies and the corresponding UMTA and FHWA regional and division offices of California, Arizonia, New Mexico, Texas, and Pennsylvania. (See app. II for a specific listing of agencies and locations.)

## CHAPTER 2

## URBAN PLANNING PROCESS AND RESULTING PROJECTS UNCHANGED

Urban area TSM (short-range) plans should be the result of a coordinated planning process that integrates actions affecting automobiles, public transit, taxis, pedestrians, and bicycles. In developing the plan, urban transportation officials are to consider a wide range of projects to improve the efficiency of existing roads, to reduce vehicle use in congested areas, and to improve transit service and internal transit management.

The regulations have resulted in urban areas' giving more emphasis to short-range, low-cost solutions to transportation problems. However, short-range plans continue to be developed individually by highway, transit, and traffic engineering agencies, and the types of transportation projects being implemented continue to be the traditional projects--usually involving only one mode--that were undertaken prior to the regulations. These traditional projects include transit equipment purchases and facilities construction as well as highway construction. Projects generally not being undertaken are those that are innovative or controversial such as increased parking charges and staggered work hours.

Although urban areas have increased their emphasis on short-range planning, the regulations have not had much of an impact on the planning process and the types of transportation projects being implemented because:

--FHWA and UMTA are not administering the regulations jointly. (See ch. 3.)

--MPOs are not able to coordinate the urban transportation planning process. (See ch. 4.)

--Various funding and legal provisions discourage the implementation of TSM projects. (See ch. 5.)

### URBAN TRANSPORTATION PLANNING PROCESS NOT COORDINATED

The joint planning regulations call for an urban area's transportation plan to be developed by a cooperative process. Local officials are required to consider a wide range of transportation projects under a regional framework that treats urban transit and highways as part of a single, integrated

urban transportation system. As part of the process, various projects should be combined into coherent, mutually reinforcing strategies to achieve specific areawide objectives. If this were done, then the projects would support and enhance other projects, so that the impact of the projects as a whole would be greater than the impact of each individually. For instance, implementation of a high-occupancy vehicle lane may be complemented by establishing park-and-ride lots and improving transit service within a transportation corridor. In the seven urban areas reviewed, however, this type of planning and implementation of TSM projects is generally not occurring.

Some State and local transportation officials do not recognize that TSM aims to treat all urban transportation modes and services as part of a single, integrated urban transportation system. They view TSM as merely plans for short-range projects for individual needs--something they have done for years. For instance, a California transportation official said TSM offers nothing new to the traditional traffic engineering approach to solving traffic problems. Similarly, a San Diego area official defined TSM as all projects that would make the transit operation less costly and more productive. Since these types of projects were always included in the plans, he did not believe that the regulations were needed.

As a result, TSM plans, for the most part, continue to be developed on a modal 1/ basis rather than as a result of a complementary and comprehensive process that would lead to the implementation of areawide, intermodal TSM projects. State and local officials indicated that their TSM plans were nothing more than a collection of individual plans. San Diego area transportation officials said, for example, that the regulations have resulted in little change, as the various traffic and transit departments merely take their planned traffic and transportation projects and put them together under the title of TSM. Phoenix area transportation officials said that their TSM plan is just a stapled-together collection of individual transit and traffic plans. Such a process does not produce integated plans that are the result of coordination among the various local agencies.

FHWA and UMTA evaluations of the transportation planning process offer further evidence that the transportation planning process is not being coordinated, as the regulations require. UMTA and FHWA reviewed 44 urban areas' TSM documents

---

1/Modal, as used in this report, will refer to individual highway, transit, or traffic engineering actions.

and reported in September 1976 that very few TSM plans showed an areawide or subarea assessment of the effectiveness of a combination of TSM projects. They reported that in most of the TSM plans, each project was planned independently of of other projects and combining projects to improve a certain situation was rarely considered seriously. More recently, a September 1978 UMTA planning evaluation in nine urban areas indicated that short-range planning was being carried out in much the same way as before the TSM requirement. The report stated that planning, relabeled as TSM planning, was still very much modal in nature. It further stated that TSM projects were usually presented by the sponsoring agency for inclusion in the programing document with little or no coordination with other plans. They reported that, as a result, one city public works department implemented a reserve lane for buses and carpools without planning complementary bus service and without planning to eliminate or modify other conflicting practices, services, and facilities. In another urban area, a parking authority planned to eliminate parking fees in the central business district of a city committed to increasing transit service and ridership.

## INNOVATIVE TSM PROJECTS NOT IMPLEMENTED

Innovative transportation projects are new or untried approaches to using the existing urban transportation system more efficiently. They might also include projects having a limited history or regional transportation projects that have historically been undertaken only in local areas. Innovative projects may include reserved bus and carpool lanes, devices giving high-occupancy vehicles preference at freeway ramps, transit malls and automobile-restricted zones. Because these projects attempt to change public driving habits or restrict vehicle use, they are often controversial.

The joint planning regulations reinforced Federal support for innovative transportation projects by encouraging urban transportation authorities to consider them. According to the regulations, controlling the flow of traffic; influencing the volume, pattern, and mix of traffic; and giving priority to buses and other high-occupancy vehicles may be the most effective measures to improve efficiency and productivity of both mass transportation services and the entire urban transportation system.

Innovative projects can help to improve a transportation system's efficiency and productivity. Federal transportation officials have stated, for example, that if ridesharing increased 1 percentage point--from 21 percent to 22 percent of

those who commute to work in vehicles--175 million gallons of gasoline could be saved annually. A 1977 FHWA- and UMTA-funded report 1/ provides another example of the possible impact of a different type of TSM project--parking taxes. According to the report's authors, proper management of an area's parking supply can change traffic flow. The report includes the following table that estimates the effect on vehicle-miles traveled (VMT) of imposing a parking tax--an uncommon type of parking management action--in the Los Angeles area:

Estimated Effects of a Los Angeles Parking Tax on VMT and Automobile Trips

| Parking cost increase | Change in VMT | Change in auto trips | Total VMT (note a) |
|---|---|---|---|
| (dollars) | (percent) | (percent) | (millions per weekday) |
| 0.25 | - 5.04 | - 7.66 | 59.416 |
| .50 | - 9.58 | -14.46 | 56.576 |
| .75 | -13.07 | -19.18 | 54.392 |
| 1.00 | -15.43 | -21.33 | 52.915 |

a/Based on an estimated total VMT of 62.570 million miles per average weekday in 1974.

Despite their potential benefits, innovative transportation projects generally are not being implemented in urban areas. The following chapters address the reasons why intermodal and innovative transportation projects generally are not being undertaken.

---

1/"Transportation Systems Management: State of the Art," Feb. 1977.

## CHAPTER 3

## UMTA AND FHWA ARE NOT ADMINISTERING THE REGULATIONS JOINTLY

Federal administration has not encouraged urban areas to comply with the regulations or work to achieve their objectives. One reason for this appears to be because the regulations, which require travel modes to be integrated at the local level, are being administered by two separate Federal agencies. FHWA and UMTA officials often do not agree on TSM plans' scope or documentation requirements. In addition, FHWA and UMTA continue to review and approve the urban TSM planning process from a fragmented, highway or transit perspective rather than from a total system perspective.

Another reason the regulatory objectives are not being accomplished is that neither FHWA nor UMTA officials have required urban areas to establish specific operational and measurable objectives and monitor and evaluate TSM projects. These processes are needed so that Federal and local officials can assess the (1) benefits of a particular TSM project or group of projects and (2) progress in achieving Federal and local goals.

### INTERPRETATIONS OF TSM DIFFER

Transportation officials in the seven urban areas reviewed differed in their opinion of what constitutes a TSM project and how costly TSM projects can be. Federal officials also do not agree and are reluctant to define TSM more clearly. As a result, each agency or urban area has developed its own definition which either limits or expands the range of projects being considered.

State and local transportation officials are not sure about what kinds of projects can or should be considered in their TSM planning process. For instance, some transit officials believe that all improvements, including route expansions and bus purchases, are TSM projects while others believe that only certain types of actions, such as marketing and management improvements, can be considered TSM projects. As a result, projects routinely included in one urban area plan may be omitted from others and it cannot be determined what kinds of projects are being implemented. Although the regulations provided a list of the kinds of transportation projects urban areas should consider in developing their TSM plans, some State and local transportation officials are not aware that the listing was intended merely to provide

examples. They believe that if a project is not on the list, they should not include it in their plan.

State and local officials also do not agree about how costly TSM projects can be. Some transportation officials consider TSM projects as only low cost, whereas others believe a TSM project can range from low to high cost. For example, a transportation official in Arizona said that TSM involves low-cost improvements, the majority of which would cost under $500,000. On the other hand, a California transportation official considered two freeway projects totaling over $13 million as TSM.

Differences of interpretation also exist within urban areas. For example, in Philadelphia, some transportation officials do not believe high-cost projects needed in the short range can be planned and programed because TSM excludes major changes in existing facilities; other officials believe high-cost projects can be included in their TSM plans. A Philadelphia transportation official stated that the TSM planning process is insensitive to one of the most critical needs of large older systems--the need for large capital expenditures to modernize and preserve the existing system. In his view, a $27 million project to renew a light rail and track system is certainly a TSM project, although he did not believe such projects could be considered TSM. However, other Philadelphia transportation officials believe that costly transportation projects--such as highway construction, resurfacing, and widening; bridge repair and replacement; right-of-way acquisition; and exclusive transit lanes--needed in the short range could be included in the TSM plan.

This confusion at the local level may be due, in part, to the lack of agreement at the Federal level. FHWA and UMTA officials also do not agree on how costly a TSM project can be. UMTA officials have stated that the purpose of TSM is to improve the efficiency of urban transportation systems at low or modest cost. FHWA officials have stated that TSM projects could be either low- or fairly high-cost projects.

Although Federal, State, and local officials continue to be confused and disagree about what can or should be considered TSM projects, FHWA and UMTA officials do not believe TSM should or could be better defined. FHWA officials believe TSM is a concept that everyone has a different opinion about but all are correct to some extent. They believe a concise definition is not possible or necessary and that the lack of a consistent definition is not causing transportation officials any problems. UMTA officials, however, believe that

the lack of a consistent definition is fostering confusion at the State and local levels and precludes an evaluation of the effectiveness of the TSM requirement. But they too are reluctant to define TSM more clearly because they believe that further defining it may limit the scope of TSM projects considered by urban areas and stifle innovation.

The disagreement and confusion over TSM has precluded evaluation of the regulations' impact. For example, an FHWA effort to determine what TSM projects were being undertaken in selected urban areas had to be abandoned, partially because the staff carrying out the project did not consistently interpret what a TSM project was. Until there is agreement on what a TSM project is, a comprehensive determination cannot be made of what projects are being implemented to make efficient use of the highways and transit system already in place.

## REQUIRED DOCUMENTATION NOT CLEAR OR USEFUL

FHWA and UMTA headquarters officials agreed on the documentation they believed would satisfy both agencies' requirements and provided joint documentation guidance to their regional offices. The guidance, however, was not specific and has been interpreted differently by their regional office staffs. In addition, State and local officials generally consider the Federal documentation requirement burdensome and question its value because the documents are not used at the local level.

### Interpretations of documentation requirements differ

In February 1978, FHWA and UMTA issued joint TSM documentation guidance to their field offices. This guidance provided general comments on documentation which UMTA and FHWA headquarters officials believed would help their field representatives address questions concerning how TSM should be documented in their region. State and local transportation officials, however, continue to perceive UMTA and FHWA's TSM documentation requirements differently. For instance, California State transportation officials believe that UMTA wants a separate TSM plan whereas FHWA wants local officials to demonstrate how TSM projects are integrated into the region's overall planning process.

Because the Federal TSM documentation guidance was not specific, many UMTA and FHWA representatives, as well as State and local officials, continue to believe the agencies' documentation requirements differ. For example, an UMTA field representative believed a yearly TSM document was required but the form of documentation was not as rigid as

before. On the other hand, an FHWA field representative believed that urban areas were given the option on whether or not to document TSM planning every year.

UMTA headquarters officials reported in September 1978, after reviewing the planning process in nine urban areas, that in a number of regions, there was little indication that the joint guidance had been communicated to local planning agencies. They said further that FHWA field staff guidance sometimes differed from that provided by UMTA field staff and that guidance differed even among UMTA regional offices. FHWA headquarters officials believe that the joint documentation guidance should have resolved any differences between the two agencies.

Documentation not considered useful

In addition to not knowing what documentation Federal officials require, some State and local transportation officials also questioned the documents' usefulness. They perceive developing the TSM plan as a burdensome documentation process which meets a Federal requirement but is not useful to them at the local level. Typical comments of State and local transportation officials follow:

--Phoenix transportation officials said the regulations' main impact seems to be in generating paper, as the TSM plan is not used and the time required to produce it takes away from more productive work.

--San Diego transportation officials said the TSM plan and programing document are not of any real use to individual cities and counties because they usually rely on their own plans and project listings and use the TSM plan merely to meet a Federal requirement.

--Texas State transportation officials said the TSM plan and programing document are of little value to local governments and are basically produced to fulfill a Federal requirement. In addition, they estimated that before the regulations were issued their planning staff was spending about 80 percent of their time planning and 20 percent on paperwork. However, since the regulations were issued they estimate their planners were spending about 70 percent of their time on paperwork and about 30 percent on planning.

UMTA and FHWA do not consider TSM merely a Federal paperwork requirement. On the contrary, they believe the TSM planning process should, among other things, help to conserve scarce Federal and local funds and allow cities to make intelligent trade-offs between automobiles and public transportation.

## FEDERAL PLANNING REVIEWS ARE FRAGMENTED

Although urban areas are required to submit one plan for highways and transit, their planning process is reviewed by the Federal highway and transit agencies separately and from a modal perspective. According to FHWA and UMTA officials, coordinating the review is difficult because of staff size differences. In addition, the Federal review often emphasizes an area's compliance with the regulations' technical requirements more than the issues being addressed in the planning process.

According to the joint planning regulations, UMTA and FHWA are required to review and evaluate the transportation planning process annually to determine if the process has met their planning requirements. If this joint review and evaluation is to be effective, then UMTA and FHWA must coordinate among themselves and provide guidance to urban planners on meeting the Federal planning requirements. However, joint review and evaluation is difficult because FHWA and UMTA have not developed specific criteria for evaluating an urban area's planning process. In fact, UMTA and FHWA are arriving at different interpretations on urban areas' progress in meeting the regulations' objectives. For example, officials in one urban area were told by an FHWA official that their planning process met Federal requirements but were told by an UMTA official that it was not adequate and they needed to consider additional transportation actions. Effective coordination between FHWA and UMTA will not be possible until specific criteria for evaluating an area's planning process are established and enforced.

In addition, UMTA and FHWA review urban area planning processes separately, which does not support coordination in urban areas. Generally, UMTA's review is limited to the transit portions of the planning process and FHWA's review is limited to the highway portions. Officials of both agencies stated that they generally commented only on the portion of the plans that pertained to their respective modes. Therefore, no Federal review is made of urban area planning processes from an overall transportation perspective.

Both FHWA and UMTA officials believe that staff size differences between the two agencies is a primary reason why joint delegation of authority is not working. In fiscal year 1979, the UMTA field staff was authorized to be 164 employees compared to the FHWA field staff authorization of 2,347. FHWA and UMTA officials stated that due to a lack of staff and a large number of MPOs, there is significant delay in UMTA's providing comments to MPOs on TSM planning and programing documents. They also stated that UMTA's review of the TSM plan and programing documents is often 6 to 8 months behind FHWA's review, and that UMTA often starts its review after the FHWA review has been completed.

The following example illustrates the workload placed on UMTA's staff. Until November 1977, only two professional staff members worked in UMTA's region VI office. These two people were responsible of all liaison among UMTA headquarters, 5 States, 37 MPOs, and all the transit operators in the region. As a result of UMTA's decentralization, staffing was increased and as of March 1979, this regional office had 13 people of which 2 were planners. However, even with 2 planners, a detailed and timely review of the planning documents of 37 MPOs in region IV still may not be possible. Besides conducting planning document reviews, the region's planning responsibilities entail reviewing and approving approximately 40 UMTA planning grants a year.

In addition, the Federal planning reviews are often limited to determining compliance with the regulations' technical requirements. The September 1978 UMTA evaluation of the planning process in nine urban areas stated that in most of these areas no evidence existed of substantive review of TSM plans by either UMTA or FHWA. They further said that most of the TSM plans reviewed were "shopping lists" which offer little promise to aid local transportation programing and this condition is likely to continue until UMTA and FHWA establish and enforce specific requirements against which TSM planning can be evaluated. UMTA headquarters officials said that they realized their field representatives were unable to review the entire transportation planning process and attributed the partial review to staff limitations. FHWA headquarters officials said that, although they were not sure, they hoped their field representatives were reviewing the entire transportation planning process; but at the same time, they said they expected their field representatives to emphasize and comment only on highway planning activities.

In three previous reports, 1/ we stated that fragmented Federal administration is one of the major impediments to planning coordination and integration. In the March 1978 report, we stated that integrated Federal administration of the urban transportation planning process could result, among other things, in improved coordination, more efficient grant delivery, and more effective Federal technical assistance. In this report, we recommended, and the Secretary of Transportation agreed, that additional steps were needed to integrate Federal administration of the planning process.

In November 1978, the Secretary proposed that FHWA and UMTA be consolidated into a Surface Transportation Administration. Department of Transportation officials said that several organizations are concerned that highway and transit identities and interests would be lost in the proposed administration. They also said that this was not their intent and that perhaps they should consider other organizational options to provide for "modal advocacy" in the proposed Surface Transportation Administration.

## MEASURABLE OBJECTIVES NOT ESTABLISHED

Generally, urban areas have not established measurable objectives for assessing the effects of TSM projects implemented. While the joint regulations did not prescribe specific standards or minimum requirements to be met in developing TSM plans, they stated that plans should set forth the underlying goals and policy objectives and the strategy to accomplish them.

FHWA and UMTA officials have not prescribed specific standards or minimum requirements because they believe that the need for specific TSM projects varies from one community to another and so national recommendations are not possible. Urban areas, however, should establish their own measurable objectives. Measurable objectives are needed because they (1) help identify transportation system problems, (2) establish the scope of TSM projects needed to address these problems, and (3) provide a basis for establishing performance measures to evaluate the impact of TSM strategies.

---

1/"Hindrances to Coordinating Transportation of People Participating in Federally Funded Grant Programs" (CED-77-119, Oct. 17, 1977), "Federally Assisted Areawide Planning: Need to Simplify Policies and Practices" (GGD-77-24, Mar. 28, 1977), and "Making Future Transportation Decisions: Inter-Modal Planning Needed" (CED-78-74, Mar. 16, 1978).

All seven urban areas we reviewed had established goals and objectives. But in six of the seven areas, the objectives are not specific enough to be measurable. In one urban area, for example, the stated short-range goals are to

--preserve, revitalize, and expand transportation systems and services,

--conserve energy, improve air quality, and increase social and environmental amenities, and

--reduce traffic congestion and facilitate traffic flow.

The urban area short-range program objective is to achieve maximum efficiency and productivity of the urban transportation system. Because this objective is not specific enough to be measurable, transportation officials will not be able to determine whether the planned transportation projects contribute to meeting the program's goals.

Determining which projects planned by an urban area contribute to meeting its goals can be difficult even when objectives are measurable. This is because the programing document does not discuss the relationship between the planned projects and the area's objectives. The Los Angeles urban area, for example, has established objectives that are specific enough to be measured. These objectives include (1) reducing transportation system fuel consumption equivalent to a 5-percent reduction in vehicle miles traveled in each 5-year period from 1980 to 1995 and (2) increasing transit ridership, currently about 3 percent, to 6 percent by 1990. However, the programing document does not specify how the planned projects will help to attain the stated objectives and, as a result, a determination cannot be made of which projects will help to meet the program's objectives or whether the planned projects are compatible with its objectives.

An FHWA and UMTA evaluation of the planning process shortly after the regulations were issued identified these same problems. In their 1976 evaluation of 44 urban area's TSM plans, FHWA and UMTA found that over half the areas made some reference to their general goals and objectives in the TSM plan but few attempted to relate these goals and objectives to the TSM actions discussed. They also found that some typical but rather general TSM objectives were to

--make efficient use of existing facilities and improvment dollars;

--provide for increased mobility of all persons, particularly the elderly and handicapped; and

--conserve energy and protect the environment.

UMTA and FHWA headquarters officials concluded and advised their regional offices that urban areas should develop more specific operational, quantifiable objectives for measuring the effects of TSM actions or groups of actions. However, we found that measurable objectives are generally still not being developed because Federal field officials have been reluctant to insist that urban areas establish them. They believe that such a requirement may be perceived as too much Federal involvement in local decisionmaking and that an urban area's goals and objectives should be developed in response to the area's needs and not simply in response to a Federal requirement.

## MONITORING AND EVALUATION NOT BEING DONE

TSM monitoring and evaluation are necessary to determine if satisfactory progress has been made in meeting national and urban area goals. Monitoring and evaluation may also provide useful information for improving existing TSM projects and provide a basis for future TSM planning decisions. However, neither Federal, State, nor local transportation officials know what the TSM effort is accomplishing areawide or systemwide. In addition, most State and local officials believe that their monitoring and evaluation efforts are inadequate. Two reasons cited by these officials for the generally poor quality of TSM project monitoring and evaluation were cost and lack of technical skills and hardware.

### State and local TSM monitoring and evaluation efforts

A few transportation officials believe their monitoring and evaluation of selected projects--such as a study of existing exclusive bus lanes on a major thoroughfare, periodic evaluation of carpool programs, or determining the results of signalizing an intersection--are adequate. Also, a few officials believe that TSM projects do not need monitoring and evaluation because these types of projects are assumed to be good. However, most transportation officials believe their monitoring and evaluation efforts are inadequate, especially in determining the impact of TSM projects on a regional or comprehensive, systemwide basis. For instance:

--Los Angeles area transportation officials said that a greater effort should be made in monitoring and

evaluation. The bad effect of inadequate monitoring and evaluation is that some mistakes may not be recognized.

--California State transportation officials said neither they nor the MPOs attempt to evaluate TSM projects to see if they are undertaking the right projects. According to these officials, proper monitoring and evaluation should allow them to determine, for example, whether either a freeway ramp metering project or flexible work hours project or both would be needed to solve a particular congestion or mobility problem.

Various reasons were cited for the generally poor quality of TSM project monitoring and evaluation. The one most frequently cited by State and local officials was cost. State and local transportation officials said cost factors hindering TSM monitoring and evaluation are (1) inadequate funds available for this activity, (2) a tendency for dollars to be spent on project implementation rather than monitoring and evaluation, (3) no money earmarked for monitoring and evaluation, and (4) increased cost of administering TSM has resulted in less funds available for monitoring and evaluation.

Another reason frequently cited by State and local officials was the lack of technical skills and hardware to do the needed monitoring and evaluation. For example, transportation officials in Phoenix said that they need assistance on how to measure the impact of regional TSM projects. Dallas transportation officials also said that they do not know what aspects of TSM to monitor and what the results indicate. These officials believe research is needed to assist local officials in determining what to measure and what to do with the information once it is obtained.

FHWA and UMTA, both individually and jointly, have supported and continue to support a number of research projects designed to assist State and local officials in assessing the impact of various TSM projects. These projects have resulted in reports providing information about the range of projects that are relevant to TSM, assessment of the areawide impact for various classes of TSM projects, and effectiveness of selected TSM projects. In addition, FHWA is currently evaluating selected applications of priority treatment for high-occupancy vehicles and various traffic control systems. A primary objective of one of the projects included in this study is to evaluate priority techniques for high-occupancy vehicles, considering benefits, costs, environment impacts, and institutional and public acceptance.

UMTA and FHWA officials agreed that the general lack of evaluation and monitoring is a weak area in transportation planning. Although they have encouraged urban areas to do more monitoring and evaluation, they do not believe that they can or should require monitoring and evaluation because such a requirement would increase the burden on local officials and might result in a decrease in the number and type of TSM projects implemented.

Federal monitoring and evaluation efforts

Monitoring and evaluation of the TSM effort nationwide or urban areawide is difficult if not impossible because it is not known exactly what data is needed and the data currently being collected is not comparable. State and local officials now collect urban transportation planning data using different definitions, time periods, and methods of collection. Federal officials recognize this problem and continue to search for solutions that will not substantially increase the paperwork burden on local officials.

In the fall of 1975, the Transportation Research Board, an agency of the National Research Council, organized a committee to assist the Department of Transportation in developing a minimum set of urban transportation data to be reported to the Department on a uniform basis. The committee consisted of representatives from MPOs, State departments of transportation and highway departments, mass transit operators, and other professionals.

According to this committee, a set of urban transportation data was needed as a basis for determining national policy for continuing existing transportation programs and initiating new ones. The committee then developed, tested, and recommended a set of data elements that required the collection of specific highway, public transit, and demographic data.

In October 1976, FHWA and UMTA endorsed the committee's recommendations and hoped to issue an appendix to the joint regulations requiring urban areas to report these indicators. In January 1978, however, FHWA and UMTA issued a memorandum to their regional offices stating that, although they still endorsed the committee's recommendations, in the interest of minimizing the reporting requirements of Federal regulations, they did not now plan to require urban areas to report these indicators. But they did request their regional office staffs to encourage State and local officials to work together to establish compatible definitions, time periods, and methods for data collection. Until compatible definitions, time periods, and methods for data collection are established and

the data collected by the Department of Transportation, Federal transportation officials will not be able to assess the overall impact of the TSM effort or the progress being made in accomplishing national or urban area goals.

## CONCLUSIONS

The transportation systems management concept, in theory, has the potential to increase efficiency and productivity of each area's total transportation system. It is unlikely, however, that this potential will ever be realized without more aggressive leadership to reach a common understanding on such matters as the regulations' scope and documentation requirements. Unless agreement is reached on such essential elements, the concept's potential will not be realized.

Federal administration of the urban transportation planning process should be consolidated. Although the regulations require urban areas to integrate their transportation planning process, FHWA and UMTA continue to administer and review the planning process separately and on a modal basis, with neither agency providing an overall transportation perspective. Consolidation should provide uniformity, minimize the confusion that exists at State and local levels, and increase coordination of the planning process. A Department of Transportation proposal to consolidate FHWA and UMTA is a step in the right direction; it could overcome some of the problems we noted.

In addition, Federal, State, and local officials are not able to assess the overall impact of the regulations or the progress being made in accomplishing national or urban area goals. Before an overall assessment can be made, urban areas need to establish specific measurable objectives and do more comprehensive monitoring and evaluation of existing TSM projects.

We recognize that better monitoring and evaluation techniques need to be developed to assess the overall impact of TSM, but techniques are available to assess the impact of individual TSM projects and some combination of projects. We believe that urban areas can and should establish specific measurable objectives and do more monitoring and evaluation of TSM projects implemented in order to determine whether they are making progress in achieving their transportation objectives and which TSM projects are worthwhile. In addition, we endorse FHWA and UMTA's continuing efforts to improve transportation project monitoring and evaluation techniques.

## RECOMMENDATIONS

To improve understanding of the TSM concept and help urban areas establish meaningful and effective transportation planning processes, the Secretary of Transportation should:

--Require FHWA and UMTA to agree on the definition, scope, objectives, and requirements of the TSM regulations and be sure that the results are communicated clearly and consistently to their regional staffs and State and local officials responsible for carrying out the planning process.

--Integrate the Department's administration of the planning and review functions by (1) providing State and local officials with consistent direction and (2) reviewing the planning processes in urban areas from a total transportation system perspective.

--Require FHWA and UMTA to work with State and local officials in developing specific, measurable transportation objectives of projects or activities that are aimed at improving existing urban transportation resources.

## AGENCY COMMENTS AND OUR EVALUATION

The Department generally agreed with and supported these recommendations. It stated that it would provide additional guidance to clarify the TSM concept.

Department officials pointed out that they had taken a number of administrative actions to improve and strengthen planning. They stated that they proposed a number of legislative changes, some of which were incorporated in the Surface Transportation Assistance Act of 1978.

In addition, the Department is proposing establishment of a Surface Transportation Administration which officials believe would improve coordination of highways and public transportation programs at all levels. Although the proposed Surface Transportation Administration could improve Federal administration of the urban transportation planing process, we believe that the Department should not wait until the Surface Transportation Administration proposal is adopted but should begin to take steps to integrate more fully its administration of the planning regulations.

The Department also stated that it plans to continue encouraging State and local officials to develop measurable transportation objectives and TSM measures of effectiveness.

## CHAPTER 4

## MPOs HAVE BEEN UNABLE TO COORDINATE THE PLANNING PROCESS

The joint planning regulations gave MPOs the responsibility for developing a plan for their areas, integrating highways and public transit into a single transportation system through the cooperative efforts of State and local groups and agencies. Transportation planning in urban areas, however, continues to be done independently by the various State and local agencies. MPO management of the TSM process has not resulted in the coordination and integration envisioned by the regulations. Most transportation officials believe that urban transportation planning has not been coordinated and integrated because MPOs do not have sufficient authority and projects identified as TSM projects do not have a regional constituency.

### MPO ROLE IN THE PLANNING PROCESS IS LIMITED

The TSM regulations require that planners, implementers, and representatives of other agencies and organizations that can affect the transportation system meet on a continuing, cooperative, and coordinated basis to identify and address regional transportation problems and their solutions. Within this framework, the MPO is to act as coordinator. The MPO is to provide the forum in which representatives of local governments and transportation planners and operators can meet to (1) discuss problems and opportunities for increasing efficiency of the area's transportation system through short-range improvements, (2) identify and resolve conflicting proposals, (3) identify and design complementary strategies which are beyond the authority of one implementer, and (4) sort out roles, responsibilities, and time frames for carrying out recommended plans.

The regulations do not prescribe the specific methods MPOs should use to carry out the TSM planning process. FHWA and UMTA believed that the range of TSM projects which could be considered and implemented required some flexibility in the methods used. They also believed that a variety of approaches could be effective as long as the MPO provided a forum for mutual problem solving and cooperative actions. Therefore, the approaches used by MPOs are matters of local determination.

Most MPOs have not established a coordinated regional decisionmaking process. Of the seven urban areas included in our review, only the Dallas-Ft. Worth and Philadelphia MPOs had established a framework for such a process, but neither area had implemented the process at the time of our review. Without such a process, opportunities to improve the efficiency and productivity of an urban area's transportation system may not be realized. The difficulties confronting the MPO in establishing a coordinated regional decisionmaking process are discussed later in this chapter. (See pp. 24 to 29.)

As mentioned earlier, regional TSM plans are generally nothing more than a compilation of plans prepared by the various local planning and operating agencies. In most areas, the MPO has little or no involvement in developing these plans. The MPO's exclusive reliance on local agencies to provide the information to be included in the region's TSM plan does not produce integrated plans.

Independent FHWA and UMTA evaluations support this fact. In its evaluation of the planning programs in nine urban areas, UMTA stated that local officials indicated that very little TSM coordination and management continued after formation of TSM committees in the MPO. In a 1978 report on its evaluation of the TSM plans of seven urban areas in one State, an FHWA division office stated that the MPO's degree of reliance on local operators in the TSM process varied but for some urban areas the local operators dominate the process. It stated further that total reliance on the operators deprived the TSM process of the MPO's overall perspective.

According to Department of Transportation officials, many of the problems associated with MPOs are the result of two factors: (1) the changed relationships and responsibilities of elected officials and transit and highway officials at the State and local levels and (2) difficulties associated with pulling together separate and sometimes competing interests. Exacerbating the situation is the fact that changes at the local level tend to come slowly, simply because any attempt at building new institutions is inevitably a slow process.

## MPO PROGRAMING AND FUNDING AUTHORITY IS LIMITED

Although most transportation officials believe that a regional organization such as the MPO is needed to bring

about the type of coordinated planning process the regulations proposed, many believe that the MPOs do not have sufficient authority to carry out their coordinating role.

Most MPOs, including all of those in our review, have only limited programing authority. MPOs can neither implement projects themselves nor force a local jurisdiction to implement any TSM project it does not wish to implement even though such projects would help to achieve regional goals and and objectives. Generally, a local legislative body, such as a city council, must approve any projects undertaken within its jurisdiction before they can be implemented even though the plans have been endorsed by the MPO. Therefore, implementation of specific improvements, even though they may have been indicated by studies of TSM strategies, is a process over which the MPO has little control.

The regulations did establish a link between planning and project implementation by requiring that each urban area develop a priority listing of near-term transportation improvements as part of the planning process. According to the regulations, those projects included in the TSM plan that have the greatest positive effects on system efficiency should receive priority in the program documents. Although some local transportation officials disagreed, most believed that the MPO did not, could not, and should not establish priorities for transportation projects. Most believed the local jurisdictions and the operating agencies were in a better position to establish priorities because the local jurisdictions provide the funds and the operating agencies are more familiar with what should be done.

MPOs generally do not have the authority or ability to fund or support TSM projects. MPOs, including those in all seven urban areas reviewed, generally do not have taxing authority; therefore, they do not have their own source of funds. In addition, they have little control over the funds provided directly to the local jurisdictions and agencies for implementing projects. Funding of projects is usually provided by the Federal Government with matching funds provided by State and local governments. Although the MPO must review and concur in a local agency's request for Federal funds, the MPO's ability to use this power to effect changes in the planning process or the type of projects being implemented is limited.

The regulations do give the MPO some control over local programing and funding. The joint regulations make MPOs responsible not only for coordinating development of the plans but also for the programing documents. To relate the

planning and programing processes, the regulations require that projects in the programing documents be drawn from the TSM and long-range plans. The regulations further require that the projects included in the programing documents be endorsed by the MPO before the projects can be eligible to receive Federal funds. Therefore, if an agency did not cooperate with the MPO, in theory its projects could be excluded from the programing document and thus ineligible for Federal funds. This requirement for MPO endorsement is the basis for any potential power MPOs may have.

However, MPOs generally have not used that power. Several reasons could account for this. First, the MPO's existence depends to some extent on participation of the local jurisdictions and agencies within its boundaries and its ability to maintain a good working relationship with them. Second, the MPO is made up of local elected officials, who generally attempt to maximize the amount of Federal funds the area receives and thus are reluctant to exclude projects from the programing document because the urban area may not receive some Federal funds for which it is eligible. Finally, the MPO's ability to establish project priorities for the urban area is hindered by fragmentation of the planning and programing process within the urban area.

Federal, State, and local officials are generally opposed to giving the MPO additional authority because they view such an action as (1) an infringement on State and local rights or (2) creating another level of government that would result in more paperwork and delays. Some of them also believe that additional funding and programing authority should not be given to the MPO because it is not elected by people who can hold it accountable for its actions. In addition, the Senate Committe on Public Works and the House Committee on Public Works and Transportation opposed provisions of the Department of Transportation's proposed planning regulations, published in November 1974, that gave the MPO more direct programing and budgeting authority because they viewed the proposed MPO authority as too specific and exceeding the intent of the Congress.

## MPO ABILITY TO INFLUENCE THE PLANNING PROCESS IS LIMITED

Because MPOs have not been given sufficient authority, they have had to rely on their persuasive powers to influence the transportation planning process. In most cases, these persuasive powers have been insufficient to bring about coordination of the planning process. The MPO's ability to influence local governments and transportation agencies has

been limited by (1) the existing relationship between FHWA and UMTA and the State and local implementing agencies, (2) the voluntary nature of local agencies and jurisdictions' participation in the planning process, and (3) the State and local governments and agencies' perception of the MPO as an agency created to satisfy a Federal requirement.

## Existing Federal, State, and local planning relationships

The traditional relationship among the local operating agencies, States, and UMTA and FHWA has limited the MPOs' influence over local agencies and their ability to coordinate a rational decisionmaking process among local transportation authorities. The MPO should provide a forum where negotiations could take place among local transit, highway, and other government officials to arrive at the most efficient allocation of the region's financial resources.

Local modal agencies, however, are accustomed to the traditional lines of communication which exist between them and their State or FHWA and UMTA. The local transit agencies usually work directly with UMTA representatives. The local highway agencies usually work with FHWA through the States' departments of highways or transportation. Therefore, MPOs are often bypassed completely in the negotiations between the local agencies and either the State highway agencies or FHWA and UMTA, and as a result the planning and programing process is often fragmented and trade-offs that would benefit the overall region may not occur. Instead, the type of projects programed in urban areas continue to reflect the traditional priorities of the modal operating agencies.

## Participation in MPO is voluntary

Another factor which has weakened the MPO's influence is that frequently a jurisdiction's or agency's participation in the MPO is voluntary. If an organization does not participate in the planning process, it feels no obligation to implement those projects suggested by the process. One MPO official conceded that his organization is only an advisory group because many local agencies are not represented on the MPO board and as such are not bound to accept the MPO's recommendations. A State transportation official stated that cities can withdraw or threaten to withdraw from the MPO at any time and, as a result, the MPO's powers are limited.

## State and local officials' perception of the MPO

Many State and local officials believe that the MPO was established merely to satisfy a Federal requirement. The MPO's ability to influence the transportation planning process depends to a great extent on its value and acceptance as perceived by the other participants in the process.

State and local officials in all the urban areas reviewed perceived the MPOs value as limited because of one or more of the following factors:

--The MPO staff does not have needed technical skills.

--The number of local jurisdictions and agencies involved in the transportation planning process is too large to coordinate effectively.

--The representation of local jurisdictions in the MPO is not equitable.

### Technical skills inadequate

Some State and local officials in the areas reviewed perceived the MPO as lacking the technical skills necessary for short-range planning. According to these officials, a detailed knowledge or understanding of the operating characteristics of the various transportation modes was needed for effective short-range planning. They generally believed that the operating agencies, not the MPO, have staff with the needed technical skills and abilities.

FHWA and UMTA recognize that MPOs may not have the expertise needed to do certain types of short-range, operational planning. They believe the operating agencies should do this type of planning if they have the expertise and have encouraged MPOs to pass on some of the Federal planning funds to local agencies for this purpose.

### Number of participants too large

Urban transportation planning requires the cooperation of organizations responsible for planning, implementing, operating, and maintaining a variety of transportation facilities and systems. In Los Angeles, local transportation officials believe that the sheer size of the urban area and the number of jurisdictions and agencies involved in the process hindered the MPO's ability to coordinate the process effectively. The Los Angeles area MPO is comprised of 130

agencies and jurisdictions. In comparison, the number of agencies and jurisdictions in the other MPOs included in our review ranged from 7 to 26.

### Agency representation inequitable

Representatives of many agencies and jurisdictions which comprise MPOs do not believe that the MPO provides an equitable forum for cooperative decisionmaking. Officials of small jurisdictions believe that the large, dominant cities can and have unduly influenced the MPO. Officials of larger jurisdictions, on the other hand, did not believe they were adequately represented by the MPO because they have no greater weight in the MPO voting structure than the smaller jurisdictions, although they usually represent a substantially greater proportion of the population in the urban area.

## LACK OF REGIONAL CONSTITUENCY

Many transportation officials and experts believe that the lack of a regional constituency is another reason why areawide, intermodal TSM projects have not been undertaken.

A regional constituency for TSM projects has not developed because (1) the planning process does not include those groups which could form a base of public support and (2) TSM projects do not result in the construction of highway or transit facilities which would create jobs or provide large amounts of Federal funds to the region. The categorically funded programs that traditionally support transportation projects have large, organized, clearly defined constituencies. The Federal highway program has support from State and local highway agencies, departments of public works, city officials, and private industry; the Federal transit program has support from transit operators, city officials and equity groups. On the other hand, TSM projects collectively do not have the support of any particular professional group or civic leaders, although some individual TSM projects may have a particular advocacy group. For example, a project to create an automobile-restricted zone within the central city may be supported by environmental groups. However, such a project is likely to be opposed by area merchants and the general public because it is restrictive and aims at changing the travel habits of auto users, as happened in two of the urban areas included in our review.

Transportation planning in urban areas requires the cooperation of organizations responsible for planning,

implementing, operating, and maintaining a variety of transportation facilities and systems. In addition to the transit, highway, and traffic engineering agencies, the regulations encourage the involvement of other community organizations. Although most TSM projects can be carried out by one or more of the local transportation agencies, some cannot Such strategies as ridesharing programs, variable work hour schedules, and parking and toll rate changes require the cooperation of others, such as employers, merchants, police departments, taxi operators, parking authorities, and the general public.

In most cases, representatives of groups and organizations other than local governments and highway, traffic, and transit agencies do not participate regularly in the planning process. In three of the seven areas we reviewed, no such other groups participated regularly in the planning process. In the remaining four areas, selected groups, but not all groups, participated. For example, in Philadelphia special interest groups and organizations such as chambers of commerce, parking authorities, and taxi companies but no general public or law enforcement representatives participate in the planning process. The Los Angeles and Phoenix planning processes, on the other hand, provide for general public representation but not for representation by the other special interest groups or organizations.

TSM projects must have public support before they can be approved by the local transportation decisionmaker. Local officials in all the areas we reviewed stated that they were not able to implement projects that may be controversial. Therefore, MPOs have followed a cautious approach, tending to shy away from controversial issues. One local official stated, for example, that the MPO structure does not allow controversial TSM projects to be considered because it is comprised of elected officials who will not disrupt people's driving habits if they want to get reelected. Another official believed that transportation planning required some hard choices that the MPO is unable to make. This official stated that the MPO's lack of power becomes evident when it tries to push a hard transportation choice, such as a tax on parking.

Additional public support for more controversial projects might develop if the planning process included those agencies and organizations, such as local merchants, that can affect the outcome of TSM projects. Including these groups in the planning process might also reduce opposition that often develops after projects are planned. In a 1977 speech on TSM, the FHWA Director of Highway Planning stated that bringing representatives of such diverse groups as merchants,

employers, and the general public into the early phases of the TSM planning process can help to identify and nurture informed support for the whole range of TSM projects, especially those that restrict the use of low-occupancy vehicles. He also pointed out that several downtown transitways had come about in this manner, with merchants wanting better service reliability and with citizens wanting more pleasant surroundings. Those groups that provide or are affected by transportation decisions should be included in the planning of TSM projects, and the MPO, as planning coordinator, needs to make sure these groups are represented and participate in the planning process.

## CONCLUSIONS

FHWA and UMTA are responsible for reviewing and evaluating the transportation planning process in each urban area to determine if the process has met the planning requirements, thus making the area eligible to receive FHWA and UMTA capital and operating funds. One of these requirements is that urban areas establish a coordinated transportation planning process. MPOs generally do not have sufficient authority to require that coordinated transportation projects be implemented, and most MPOs have not established a coordinated regional decision-making process, as illustrated by the following factors.

First, short-range transportation planning is generally being done independently by each local agency and jurisdiction within urban areas. The result is a TSM plan that is a compilation of individual plans rather than an overall, unified plan that has been developed from a coordinated transportation planning process.

Second, groups that provide or are affected by the area's transportation services are frequently not included in the planning process. As a result, regional constituencies for TSM actions have not developed, controversial actions are not considered feasible by local officials, and projects are often opposed after planning is completed.

## RECOMMENDATION

To promote coordination of the urban transportation planning process, the Secretary of Transportation should require FHWA and UMTA to not approve an urban area's planning process until the area has shown that the plan (1) is an overall, unified plan for the urban area resulting from a coordinated process and (2) includes input from those groups or agencies that provide or are affected by the area's transportation plan.

## AGENCY COMMENTS AND OUR EVALUATION

Department officials agreed that the MPO must include all appropriate parties in the planning process. However, they believe that this can be achieved best through continued development of the process rather than through confrontation. We agree that cooperation rather than confrontation can and should be used to encourage an improved planning process. However, the Department should not continue to approve planning processes that do not comply with the regulations' requirements. Approval of processes that are not in compliance with the regulations can mislead local officials into believing their planning process is acceptable, adding to confusion concerning the regulations and making it more difficult for the Department to take corrective actions in the future. After urban areas have been notified of deficiencies in the planning process and given a reasonable time for making changes, the Department should use the other methods available to it for bringing about compliance with the regulations.

The regulations provide that the Department can either not approve or conditionally approve planning processes that do not comply with the regulations. Conditional approval could be done by selectively withholding funds for specific programs or combinations of programs. Because the approval process is the only means the Department has to make sure that urban areas comply with the regulations, we believe the Department should use the process to encourage local action.

## CHAPTER 5

## IMPEDIMENTS TO TSM PROJECT IMPLEMENTATION

Federal funds were not increased nor was a specific set-aside of funds made when the TSM requirements were adopted to encourage urban areas to implement intermodal, areawide TSM projects, including those innovative TSM projects that would encourage the public to use existing transportation systems more efficiently.

TSM projects as well as traditional transportation projects, such as transit operating assistance and highway construction, can be funded through a number of existing Federal programs. However, the need for or desirability of traditional transportation projects beat out many TSM projects in the competition for Federal funds.

In addition, TSM projects supporting ridesharing and high-occupancy vehicle use are not being implemented in some instances because some Federal, State, and local laws and regulations prohibit or discourage their use.

### FEDERAL TRANSPORTATION FUNDS FACILITATING TSM IMPLEMENTATION

UMTA and FHWA carry out research and development programs that support the development and testing of innovative TSM projects. In addition, UMTA's discretionary grant program can be used to support innovative TSM projects. Support from these sources could help to overcome opposition to projects that attempt to change public driving habits.

States and numerous localities participate in the FHWA research and development program. Research under this program is performed by commercial firms, universities, associations and institutions, and several Federal agencies in addition to FHWA and State highway agencies. One of the program's major research areas--reduction of traffic congestion and improved operational efficiency--is particularly supportive of TSM projects. The research in this area is concerned with improving design for new facilities and greatly increasing the operational efficiency of existing highways (more people per vehicle) and by keeping the demand-capacity relationship balanced through signal timing and rerouting of traffic.

Support for TSM projects is also provided by UMTA's research program, which has a demonstration activity that introduces and analyzes innovative actions to improve

public transportation services in an operating environment. The demonstrations normally last for 2 to 3 years and are fully funded. The grant recipients are local sponsors who conduct the demonstration subject to evaluation by third parties. In addition to these individual projects, from January to May 1979, UMTA sponsored five workshops across the Nation on techniques for improving productivity and performance of transit operations. One of the workshops' goals was to provide a forum for transit operators to learn what other transit operators have done to improve their systems' operating efficiency and effectiveness.

An UMTA official said UMTA's research has developed a number of techniques that could improve efficiency and effectiveness of transit operations but the transit industry has not widely adopted these techniques. Another UMTA official agreed that a number of techniques developed under UMTA's research effort had not been widely adopted, but he believed continued UMTA research support of these techniques would promote their adoption.

Other UMTA officials, however, doubt that innovative TSM projects can be adequately supported through UMTA's research program. In 1976, UMTA's Administrator commented on the problems and needs surrounding the funding of TSM, particularly the innovative, areawide, intermodal projects. He said that most transit operators simply cannot--considering their spiraling deficits and funding agency pressures--free UMTA transit assistance funds for innovative TSM implementation, especially where additional cost is involved. He said it was impossible for UMTA to use the research and demonstration program to stimulate direct TSM activity throughout the country, as the appropriations will never be large enough. He believed that the answer may be for the Congress to give UMTA sufficient transit operating assistance funding to award at its discretion to stimulate TSM operations broadly throughout the country. Such funding would also alleviate the need to spend research funds on proven techniques that will not be adopted.

In 1978, the Congress did give UMTA a mechanism to stimulate TSM operations. The Surface Transportation Assistance Act of 1978 (Public Law 95-599) amended the Urban Mass Transportation Act of 1964 to establish a new section 4(i), which allows a portion of UMTA's discretionary grant program funds to be set aside to support innovative public transportation projects.

UMTA program officials believe this section could give urban areas an incentive to do more innovative TSM projects.

Funding of this program in fiscal year 1980, for example, could have provided about $16 million in Federal funds. However, the Department did not ask the Congress to fund this section in its fiscal year 1980 appropriations because it believed these projects could be supported through UMTA's demonstration activity.

## INNOVATIVE, AREAWIDE TSM PROJECTS NOT COMPETITIVE

Despite the potential benefits to be realized from innovative, areawide TSM projects, Federal, State, and local transportation officials agree that these projects generally are not being undertaken. One of the primary reasons is that such TSM projects cannot compete for Federal funds against such traditional projects as transit operating assistance, bus and railcar replacement, highway construction, and non-innovative TSM projects such as local traffic signaling and bus route expansion. All projects--traditional as well as innovative, areawide TSM projects--must compete for UMTA's formula and discretionary grant asistance funds and FHWA's Federal-aid highway funds.

These Federal funding sources are generally not being used to support innovative, areawide TSM projects because (1) traditional transportation projects have priority in all urban areas, (2) large new construction and equipment purchases have widespread public and political support and result in more Federal dollars and employment opportunities in urban areas, and (3) Federal funding programs and requirements tend to favor the use of Federal funds for the more capital-intensive projects.

Traditional transportation projects have priority in urban areas because many areas are hard pressed just to fund those projects that will keep their existing transportation system maintained and operational. For example, Pittsburgh transportation officials said one of the biggest problems facing implementing agencies when a new program like TSM comes along is that existing needs account for all available funding--no funds are left over to afford additional projects.

Innovative, areawide TSM projects also cannot compete against traditional projects for Federal funds because innovative projects generally do not have public and political acceptance. TSM projects are likely to be opposed because many of them, such as parking restrictions, automobile restricted zones and exclusive lanes for buses and carpools, attempt to change public driving habits or

restrict low-occupancy vehicle use. On the other hand, major capital improvements to the transportation system frequently have public and political benefits, such as new jobs, expansion or rehabilitation of transportation resources, and new sources of revenue. UMTA officials have said that even though TSM projects may be relatively low cost, many are very risky and local elected officials will choose a more conventional project even if it costs much more.

The Energy Coordinating Council, 1/ in its proposal for a national ridesharing program, noted a similar problem with ridesharing--a TSM strategy. They said that one reason ridesharing programs are not being developed is the disinterest or inability of most State and local governments to spend Federal-aid highway funds on such activities. They said that although most all of the costs of developing ridesharing programs can be underwritten with 90 percent Federal funding, only a very small amount has been spent for such purposes.

The nature of many TSM projects--inexpensive to implement, but costly to operate--is another reason why TSM projects are not being implemented. Transportation officials believe that because essentially the same Federal requirements are imposed on low-and high-cost projects, it is preferable to apply for Federal funds for a high-cost project. For instance, San Diego transportation officials said it costs almost the same in terms of time and paperwork to receive a grant for $10,000 as it does for $100,000 or $1 million. A Dallas transportation official said that Federal-aid urban funds were not being used to support low-cost, innovative projects because of high overhead costs associated with the TSM program. FHWA headquarters officials said they have communicated to their field offices simplified Federal-aid project procedures for smaller TSM projects. But FHWA field representatives said red tape causes Federal-aid urban funds generally to be used for larger projects rather than TSM projects.

---

1/The Energy Coordinating Council was established in 1977 by the Department of Transportation as a result of the Department of Energy Organization Act. The Council helps to develop and promote energy conservation programs within the Department and is composed of all the Assistant Secretaries and Administrators of its operating agencies. The Council has formed a number of task forces, one of which is on ridesharing.

The high operational cost of such TSM projects hinders their implementation. TSM projects, such as strict enforcement of reserved transit right-of-ways, elimination of on-street parking, and restrictions on downtown truck delivery during peak hours, may require substantial operating funds but little or no funds for construction or equipment purchases. State and local officials perceive that it is easier to get Federal funds for capital projects and UMTA's grant programs provide a larger share of Federal funds for capital-intensive projects. For instance, as a California official noted, some TSM projects require continuous funding for operations rather than a lump sum to construct a project and experience has shown that it is easier to get Federal funds for a capital project. Also, an UMTA regional official said local officials find it very difficult to believe that UMTA is serious about TSM as long as it continues to require 50-percent State and local matching funds for operating assistance projects and only 20-percent State and local matching funds for large, capital-intensive projects.

ALTERNATIVES FOR PROMOTING TSM

Most Federal, State, and local transportation officials believe more needs to be done to promote TSM projects, but they do not agree on what needs to be done. Slightly more than half of the representatives of about 30 Federal, State, and local agencies believed that many TSM projects would not be implemented unless additional funds or a set-aside of existing funds were made available for that purpose. In other words, these officials believed another categorical program was the solution. According to some of these officials, a Federal set-aside or specific TSM program would be a good incentive for local politicians and planners to consider TSM projects.

On the other hand, about half of the 30 agency representatives believed that there should not be any more categorical programs. One agency representative stated that he opposed separate TSM funding because categorical grant programs tend to create false priorities and usually do not address the area's most pressing needs.

Many transportation officials who oppose a TSM categorical program believe increased Federal funding flexibility would promote TSM projects. For instance, Dallas transportation officials said there was a need for more flexibility in Federal funding. They believed that the limited amount and categorical nature of Federal funding may preclude some TSM projects from being taken. However, they also believed a categorical program for TSM projects would be helpful in getting more TSM projects implemented.

An alternative solution for promoting TSM implementation proposed by some transportation officials was a system of rewards based on meeting performance standards. For instance, Federal transportation officials said that incentives for increased productivity may promote innovative TSM projects. They said that incentives should be such that reductions in resource requirements are rewarded at the local level. For example, if an area can demonstrate a reduction in vehicle miles traveled, then it should be rewarded; and, if an area can demonstrate an increase in transit productivity, then the area should be rewarded. Before such a system could be implemented, however, appropriate performance standards would need to be developed.

## TSM PROJECTS MIGHT BE TAKEN AS A RESULT OF OTHER FEDERAL INITIATIVES

Transportation officials believe the Federal clean air requirements and the current energy situation may increase the number of areawide, intermodal, and innovative TSM projects implemented.

The Clean Air Act Amendments of 1977 require State and local governments to revise air quality plans for all areas where national ambient air quality standards have not been attained. The States were to have submitted the plans required to the Environmental Protection Agency (EPA) by January 1, 1979. These revised plans must provide for attainment of national ambient air quality standards by 1982 or, in some cases where severe problems exist, by not later than 1987. These plans must also provide for incremental reductions in emissions between the time the plans are submitted and the attainment deadline.

The Department of Transportation and EPA agree that the plans will require transportation controls in many urban areas. The controls can include TSM strategies such as parking restrictions and special high-occupancy vehicle lanes, designed to reduce emissions from transportation-related sources by means of structural and operational changes in the transportation system.

The legislation did not require that transportation control strategies be adopted, only that they be considered. However, States must comply with the air quality standards by certain dates. If EPA determines that by these dates the minimum requirements of the law have not been met, it can invoke certain sanctions. These sanctions include prohibiting new facilities that would be new stationary sources of air pollution from locating in the area and withholding certain Federal funds, including highway funds, from the area.

Current energy conservation efforts may also increase the number of areawide, intermodal, and innovative TSM projects implemented. One aspect of energy conservation efforts is a State energy conservation program which was established through enactment of the Energy Policy and Conservation Act of 1975 (Public Law 94-163). This program enables States to enter into a voluntary, cooperative effort with the Federal Government to further the State's energy conservation efforts. If a State participates in the program, then it must develop and implement a State energy plan, which must include, among other things, actions to promote the availability and use of carpools, vanpools, and public transportation.

While transportation authorities believe air quality requirements and energy conservation efforts may increase the number of areawide TSM projects undertaken, they caution that transportation objectives, such as improving worker mobility, may be overshadowed and negatively affected.

## EXISTING LEGAL PROVISIONS HINDER IMPLEMENTATION OF RIDESHARING PROGRAMS

Various Federal, State, and local laws and regulations hinder the implementation of TSM projects supporting increased ridesharing. Although Federal, State, and local officials are making efforts to overcome these hindrances, many still exist.

Some laws or regulations have been amended to facilitate ridesharing. The Massachusetts Insurance Commission, for instance, recognized that public transportation users who leave their cars at home and do not drive to work have a lower insurance risk and have been subsidizing the insurance costs of automobile drivers who drive to work because they were paying the same insurance rates. Therefore, the Commission recently moved to give monthly transit passholders discounts on their 1979 automobile insurance rates. Also, the State of California amended its laws to permit the use of State-owned vehicles for carpooling to and from work.

### Federal hindrances

Federal agencies, however, cannot develop a program similar to the one in California, as Federal law does not allow Government-owned vehicles to be used as carpools for commuting. An official of the General Services Administration, the agency responsible for setting policies and procedures governing the use of Federal Government-owned vehicles, said no efforts are currently underway to revise existing Federal law as the State of California did.

Federal tax laws and policies, which have been described as discriminating against ridesharing because they were developed during a nonridesharing era, are another impediment. For instance, commuting expenses are borne by individual commuters; however, when an employer provides free or subsidized parking, the employer incurs a deductible capital expense and the employees do not incur a tax liability (income).

Officials involved in ridesharing programs have identified a number of problems regarding taxable income to employees and expenses for employers participating in ridesharing programs. For example:

--When an employer provides all employees that share rides (transit, public express bus, private express bus, vanpool, carpool, or taxipool) an incentive (for example, $7 per month) instead of free parking, does this monthly incentive represent taxable income to the employees? Is the payment a deductible business expense for the employer?

--When an employer provides a free or partially subsidized bus ticket to his employees in lieu of providing free or subsidized parking, does that represent taxable income to the employees? Would this be a deductible expense to the employer?

The Internal Revenue Service has stated that the subject of whether, and to what extent, the value of various fringe benefits, such as free employee parking and reduced rate parking, is required to be included in the recipient's gross income has been under active study by Internal Revenue. However, an Internal Revenue official indicated that it is prohibited by the Congress (Public Law 95-427) to rule on or modify regulations concerning employee commuting expenses or the general area of employee fringe benefits prior to 1980, as the Congress (House Ways and Means Committee) is currently reviewing the whole area of employee fringe benefits.

State hindrances

State legal issues impeding implementation of ridesharing programs include (1) regulation of vanpools as public transportation carriers, (2) questionable application of workers compensation coverage to employer-sponsored vanpools, and (3) financing for vanpool programs.

A State hindrance to ridesharing arises from the fact that some State public service commissions or other governmental bodies regulate vanpools as public transportation

carriers. For instance, one State law prohibits a group of six or more individuals from riding together to and from their place of employment and sharing expenses unless the group has complied with all the requirements applicable to common motor (public transportation) carriers, such as having to obtain a certificate of public convenience and necessity before a single vanpool could be organized. This problem was also noted in a May 1978 Department of Energy report entitled "Vanpooling Institutional Barriers." The report said even in a State where certificates are expedited, it still takes 60 days from the date of application to the granting of a permit to operate, and most people looking for a carpool or vanpool lose interest after having to wait 2 months for permission to "double up," as encouraged by Government. In addition, the report stated that once permission is granted, each vanpool must repeat the process each time a person joins or leaves the pool because permission is required to change routes to go to the new rider's house. Many States have exempted or are in the process of exempting commuter vanpooling from State regulation.

State workers compensation statutes protect employees by making the employer strictly liable for employee injuries that occur within the scope of employment. However, it is questionable whether this protection covers employees who participate in an employer-sponsored vanpool program. Employers are concerned about the extent of corporate liability. For instance, a company representative said his company was reluctant to introduce vanpools without firm evidence to establish the extent of the company's liability. Federal transportation officials have said that in most States questions remain as to whether the trip is covered by workers compensation if employers sponsor the vans but definitive judicial decisions are lacking.

Another issue raised at the State level was funding. Transportation officials in two cities said that because of a State law that prohibits deficit financing, they were unable to institute a vanpool program.

Local hindrances

Ridesharing hindrances identified at the local level were (1) city- or county-owned vehicle usage restrictions and (2) city building codes that require parking spaces to be provided based on the number of building occupants. City transportation officials in one area said insurance restrictions prohibit persons other than city employees from participating in the city's vanpool program. In another city,

transportation officials said their vanpool program was not successful because, according to a city ordinance, only city employees can ride in city vans.

Some local building codes do not support high-occupancy vehicle programs. Los Angeles officials developed a parking management plan that allows a business to reduce its city-required parking space in exchange for its commitment to encourage less use of singly occupied automobiles and more use of transit and other forms of ridesharing. One such action is for businesses to designate free carpool or vanpool parking spaces in their parking facilities. Another action would be for businesses to substitute required onsite parking spaces at less expensive, more remote park-and-ride facilities. If parking is available for singly occupied automobiles, commuters lack an incentive to join ridesharing programs. Officials in the areas we visited also pointed out the need to change city parking ordinances that hinder the development of ridesharing incentives.

Department of Transportation actions to resolve legal impediments

According to Department officials, the Department has worked with the Internal Revenue Service and the General Services Administration to resolve Federal impediments to ridesharing, but the problems mentioned above remain. Efforts are also underway to resolve State and local ridesharing impediments. For instance, FHWA's Office of Highway Planning, which is responsible for TSM as well as the carpool/vanpool program, is responsible for contract management of a 1978 FHWA-funded study, which will research State laws and regulations for legal impediments to ridesharing. One of the objectives of the study is to identify (1) obstacles that could be eliminated by changes in law and (2) solutions to these problems which have been adopted by various States. This research is to include, at a minimum, impediments to ridesharing due to

--regulation by a State public utility or similar commission;

--liability, workers compensation, and insurance laws;

--motor vehicle codes and ride solicitation laws; and

--State tax laws.

An additional objective of the study is to draft a model law that would eliminate legal impediments to ridesharing.

Another FHWA effort initiated in 1978 was a study on parking management techniques. Some of the parking management strategies to be examined in phase one of this study include

--limitation on offstreet parking supply,

--parking taxes or surcharges, and

--pricing policies to favor short-term over long-term parking.

The second phase of this study will entail developing a parking management guide for State and local planners and traffic engineers based on the work done in phase one.

CONCLUSIONS

The joint planning regulations state that TSM projects which control the flow of traffic; influence the volume, pattern, and mix of traffic; and give priority to buses and other high-occupancy vehicles may be the single most effective measures to improve the efficiency and productivity of the entire transportation system. Yet these and other potentially effective TSM projects generally are not, and will not be, implemented because they cannot compete against traditional transportation projects for Federal funds.

Funding of section 4(i) of the Urban Mass Transportation Act, as amended, could provide additional funds for innovative public transportation projects. However, even if this section were funded, additional Federal funds may still be needed to support a broader range of intermodal TSM projects.

In addition, TSM projects supporting ridesharing and high-occupancy vehicle use are sometimes hindered because various Federal, State, and local laws and regulations prohibit or discourage their implementation. FHWA is supporting studies to identify and eliminate hindrances to ridesharing at the State and local levels. The Department of Transportation has also worked with other Federal agencies to resolve Federal hindrances to ridesharing. We endorse the Department's continued efforts to identify and eliminate Federal hindrances to ridesharing, as such actions set an example for others to follow and demonstrate the Department's commitment to the TSM policy.

## RECOMMENDATIONS

To promote the implementation of innovative transportation projects the Secretary of Transportation should:

--Request funding for section 4(i) of the Urban Mass Transportation Act, as amended, to test whether Federal financial incentives to State and local governments would promote more widespread adoption of innovative TSM projects. Monitoring and evaluation, comparable to the size and scope of the projects, should be required for all projects supported with these funds. If funding proves to be an incentive, then the Department should determine whether additional legislation is needed to provide incentives for projects involving more than mass transit.

## AGENCY COMMENTS AND OUR EVALUATION

Department officials stated that some innovative TSM techniques have been developed by FHWA and UMTA, both individually and jointly, under various Department programs and other innovative techniques have been developed completely through local initiative. They stated further that some local areas are now adopting these techniques and cited several examples of innovative projects, such as priority lanes, computerized traffic signal systems, and carpool and vanpool projects.

We recognize that innovative techniques have been developed and implemented, but as pointed out on pages 33 through 37, such projects have not been widely adopted. Innovative techniques are not being more widely adopted in many cases because (1) local officials generally prefer to use the Federal funds available for more traditional transportation projects they believe are needed, (2) many of the more innovative transportation projects do not have public acceptance because they restrict personal freedom of choice, and (3) the actual or potential benefits of such projects are not always known.

We believe that funding of innovative projects joined with a requirement that projects receiving such funds be adequately monitored and evaluated may help to overcome these problems. We also believe that section 4(i) of the Urban Mass Transportation Act, as amended, gives the Department of Transportation a mechanism within its existing authority to test whether Federal financial incentives would be effective in promoting more widespread adoption of innovative techniques.

Department officials stated that the Department is reexamining funding of section 4(i) of the Urban Mass Transportation Act, as amended, in the context of its review of the fiscal year 1981 transportation budget and our recommendation.

## UMTA AND FHWA REGULATORY LISTING OF CATEGORIES AND ACTIONS TO BE CONSIDERED BY URBAN AREAS FOR INCLUSION IN THE TRANSPORTATION SYSTEMS MANAGEMENT ELEMENT

a. Actions to ensure the efficient use of existing road space through

(1) Traffic operations improvements to manage and control the flow of motor vehicles, such as:

Channelization of traffic

One-way streets

Better signalization and progressive timing of traffic signals

Computerized traffic control

Metering access to freeways

Reversible traffic lanes

Other traffic engineering improvements

(2) Preferential treatment for transit and other high-occupancy vehicles, such as:

Reserved or preferential lanes on freeways and city streets

Exclusive lanes to bypass congested points

Exclusive lanes at toll plazas with provision for no-stop toll collection

Conversion of selected downtown streets to exclusive bus use

Exclusive access ramps to freeways

Bus preemption of traffic signals

Strict enforcement of reserved transit rights-of-way

APPENDIX I

Special turning lanes for exemption of buses from turning restrictions

(3) Appropriate provision for pedestrians and bicycles, such as:

Bicycle paths and exclusive lanes

Pedestrian malls and other means of separating pedestrian and vehicular traffic

Secure and convenient storage areas for bicycles

Other bicycle facilitation measures

(4) Management and control of parking through:

Elimination of on-street parking, especially during peak-periods

Regulation of the number and price of public and private parking spaces

Favoring parking by short-term users over all-day commuters

Provision of fringe and transportation corridor parking to facilitate transfer to transit and other high-occupancy vehicles

Strict enforcement of parking restrictions

(5) Changes in work schedules, fare structure and automobile tolls to reduce peak-period travel and to encourage off-peak use of transportation facilities and transit services, such as:

Staggered work hours

Flexible work hours

Reduced transit fares for off-peak transit users

Increased peak-hour commuter tolls on bridges and access routes to the city

b. Actions to reduce vehicle use in congested areas through:

Encouragement of carpooling and other forms of ridesharing

Diversion, exclusion and metering of automobile access to specific areas

Area licenses, parking surcharges and other forms of congestion pricing

Establishment of car-free zones and closure of selected streets to vehicular traffic or to through traffic

Restrictions on downtown truck delivery during peak hours

c. Actions to improve transit service, through:

Provision of better collection, distribution and internal circulation services (including route-deviation and demand-responsive services) within low-density areas

Greater flexibility and responsiveness in routing, scheduling and dispatching of transit vehicles

Provision of express bus services in coordination with local collection and distribution services

Provision of extensive park-and-ride serices from fringe and transportation corridor parking areas

Provisions of shuttle transit services from fringe parking areas to downtown activity centers

Encouragement of jitneys and other flexible paratransit services and their integration in the metropolitan public transportation system

Simplified fare collection systems and policies

Provision of shelters and other passenger amenities

Better passenger information systems and services

d. Actions to increase internal transit management efficiency, such as:

Improving marketing

Developing cost accounting and other management tools to improve decision-making

Establishing maintenance policies that assure greater equipment reliability

Using surveillance and communications technology to develop real time monitoring and control capability

## LISTING OF PRINCIPAL SOURCES CONTACTED DURING REVIEW

Office of the Secretary of Transportation:
- Headquarters

Urban Mass Transportation Administration:
- Headquarters
- Region III, Philadelphia, Pennsylvania
- Region VI, Ft. Worth, Texas
- Region IX, San Francisco, California

Federal Highway Administration:
- Headquarters
- Region III, Baltimore, Maryland
- Region VI, Ft. Worth, Texas
  - Division Office, Austin, Texas
  - Division Office, Santa Fe, New Mexico
- Region IX, San Francisco, California
  - Division Office, Phoenix, Arizona
  - Division Office, Sacramento, California

Department of Energy:
- Headquarters

Environmental Protection Agency:
- Headquarters

Albuquerque, New Mexico, Urbanized Area:
- City of Albuquerque
- County of Bernalillo
- Middle Rio Grande Council of Governments
- Sun-Tran

Dallas-Ft. Worth, Texas, Urbanized Area:
- CITRAN (City of Ft. Worth Transit)
- City of Arlington
- City of Dallas
- City of Ft. Worth
- Dallas Transit System
- North Central Texas Council of Governments

Los Angeles, California, Urbanized Area:
- City of Los Angeles
- City of Pasadena
- County of Los Angeles
- Long Beach Public Transportation Company
- Los Angeles County Transportation Commission
- Orange County Transportation District
- Southern California Association of Governments
- Southern California Rapid Transit District

Philadelphia, Pennsylvania, Urbanized Area:
- City of Philadelphia
- Delaware River Port Authority
- Delaware Valley Regional Planning Commission
- Southeastern Pennsylvania Transportation Authority

Phoenix, Arizona, Urbanized Area:
- City of Phoenix
- County of Maricopa
- Maricopa Association of Governments
- Phoenix Public Transit System

Pittsburgh, Pennsylvania, Urbanized Area:
- City of Pittsburgh
- County of Allegheny
- Port Authority of Allegheny County (PATransit)
- Southwestern Pennsylvania Regional Planning Commission

San Diego, California, Urbanized Area:
- Chula Vista Transit
- City of Chula Vista
- City of San Diego
- Comprehensive Planning Organization
- County of San Diego
- Metropolitan Transit Development Board
- San Diego Transit

State Transportation Agencies:
- Arizona Department of Transportation
- California Department of Transportation
- New Mexico State Highway Department
- Pennsylvania Department of Transportation
- Texas State Department of Highways and Public Transportation

Others:

Center for Public Policy and Administration,
California State University, Long Beach
Institute of Transportation Studies
University of California, Berkeley
University of California, Irvine
Massachusetts Institute of Technology

OFFICE OF THE SECRETARY OF TRANSPORTATION
WASHINGTON, D.C. 20590

ASSISTANT SECRETARY
FOR ADMINISTRATION

July 30, 1979

Mr. Henry Eschwege
Director
Community and Economic
Development Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Eschwege

We have enclosed two copies of the Department of Transportation's (DOT) reply to the General Accounting Office (GAO) draft report, Federal Efforts to Make Better Use of Existing Urban Transportation Resources Need to Be Strengthened. The Department is in general agreement with GAO's conclusions and recommendations. As the report indicates, DOT already is pursuing several of the actions recommended by GAO.

If we can further assist you, please let us know.

Sincerely,

for Edward W. Scott, Jr.

Enclosures

APPENDIX III

DEPARTMENT OF TRANSPORTATION REPLY

TO

GAO DRAFT REPORT OF JULY 1979

ON

FEDERAL EFFORTS TO MAKE BETTER USE OF EXISTING URBAN TRANSPORTATION RESOURCES NEED TO BE STRENGTHENED

SUMMARY OF GAO FINDINGS AND RECOMMENDATIONS

The General Accounting Office (GAO) report examines the transportation systems management (TSM) element of the transportation plan. The TSM element is to provide for the short-range transportation needs of urbanized areas by making efficient use of existing transportation resources and by identifying traffic engineering, regulatory, pricing, management, operational and other improvements to the existing urban transportation system. The joint planning regulations, which include this requirement, were published in the Federal Register on September 17, 1975 by the Federal Highway Administration (FHWA) and the Urban Mass Transportation Administration (UMTA).

The report includes a number of recommendations designed to strengthen Federal efforts to make better use of existing urban transportation resources. The conclusions and recommendations address three major aspects related to implementation of TSM projects: (1) joint FHWA and UMTA administration; (2) the Metropolitan Planning Organizations' (MPOs) ability to coordinate the planning process, and (3) impediments to the introduction of innovative TSM projects.

The GAO concludes that Federal administration of the urban transportation planning process needs to be better coordinated and that urban areas need to establish specific measurable objectives and do more comprehensive monitoring and evaluation of projects to better assess the impact of individual TSM projects and combinations of projects. GAO recommends that FHWA and UMTA reach agreement on the definition, scope, objectives and requirements of TSM, fully integrate the planning and review functions of FHWA and UMTA, work with State and local officials to develop specific measurable objectives and continue their efforts to improve project monitoring and evaluation techniques.

GAO believes that better coordination of the urban transportation planning process is needed. They point out, however, that MPOs generally do not have sufficient authority to require that coordinated TSM projects be implemented and that most MPOs have not established a regional decisionmaking process because TSM

APPENDIX III

transportation planning frequently is done by each local agency and jurisdiction within an urbanized area. They note that groups that could contribute to the process are not involved in the planning process. GAO recommended that the Secretary require that FHWA and UMTA not approve (certify) an urbanized area planning process until the area has shown that the plan is an overall unified plan resulting from a coordinated process and includes input from groups or agencies that could "provide or are affected by the area's transportation plan."

GAO concludes that some potentially effective transportation system management projects are not viable competitors for Federal funds, and that some ridesharing activities may be constrained by Federal, State or local laws and regulations. They recommend that the Secretary of Transportation request funding for innovative transit projects from section 4(i) of the Urban Mass Transportation Act, as amended. They suggest that even if section 4(i) were funded, there might still be a need for additional Federal funds to support a broader range of intermodal TSM projects. GAO further recommended that DOT continue to work with other agencies to eliminate existing Federal laws, regulations and policies that hinder ridesharing.

## SUMMARY OF DEPARTMENT OF TRANSPORTATION POSITION

The Department of Transportation is in general agreement with GAO's conclusions and recommendations. As the report indicates, DOT already is pursuing several of the actions recommended by GAO.

The report, however, does not fully recognize the subtleties of the planning requirements and the framework in which the joint planning regulations were developed. The various types of local political structures, the nature of the Federal, State and local relationships, and the appropriate Federal role in seeking redirection of planning efforts were all considerations in the development of the regulations. [See GAO note 1.]

GAO also maintains that the regulations have had little impact on the planning process and the projects being implemented. We believe that the TSM requirement has had a positive effect on the planning process and there has been a definite shift from the previous almost exclusive focus on long-range planning to consideration and implementation of projects responsive to short-range problems of urbanized areas. Planning, especially TSM planning, is by nature an evolutionary process and we have seen significant changes and improvement since 1975.

The report fails to mention the Department's alternatives analysis requirement for major urban mass transportation investments

which reinforces our commitment to TSM by local officials. As a condition of Federal assistance for major rail investments, the policy requires that alternative investment strategies be considered in order to determine which investment best serves the locality's transportation needs, promotes its social, economic, environmental and urban development goals, and supports national aims and objectives. The policy requires the analysis to include consideration of a range of alternatives, including improvements involving better management and operation of the existing street and highway network, e.g., through provision of reserved lanes for buses and other high occupancy vehicles. [See GAO note 2.]

Finally, TSM is not going to be effective without close cooperation of the Federal Government and local and State governments. The recommendations, however, focus almost exclusively on DOT actions. [See GAO note 3.]

POSITION STATEMENT

(1) Joint Federal Administration

GAO recommendation:

Require FHWA and UMTA to reach agreement on the definition, scope, objectives, and requirements of the TSM regulations and be sure that the results are communicated clearly and consistently to their regional staff and State and local officials responsible for carrying out the planning process.

Take steps to make certain that the planning and review functions of the two agencies are fully integrated so that (1) State and local officials are provided with consistent Federal direction and (2) urban area planning processes are reviewed from a total transportation system perspective.

Require FHWA and UMTA to work with State and local officials in developing specific measurable transportation objectives that are aimed at improving existing urban transportation resources.

FHWA and UMTA should continue their efforts at improving transportation project monitoring and evaluation techniques to assist State and local officials in developing techniques appropriate for particular urban areas.

DOT generally agrees with and supports these recommendations. The Department will provide additional guidance to clarify the TSM concept. We recognize that understanding of the concept and effective coordination among local officials, committed to TSM improvements, are essential to better TSM performance.

DOT is aware of the need to better coordinate highway and transit planning and review functions and has taken a number of administrative steps to improve and strengthen planning. Recently, we proposed a number of legislative changes, some of which were incorporated in the Surface Transportation Assistance Act of 1978. In addition, the Department is proposing the establishment of a Surface Transportation Administration. This reorganization is directed toward providing an integrated organization for highways and transit, enhancing the Department's responsiveness to State and local transportation needs, improving program administration and fostering cooperation among surface transportation staffs at all levels. We believe that the establishment of the Surface Transportation Administration will be a major positive step in improving coordination of highways and public transportation.

We fully agree that the Department should be encouraging State and local officials to develop measurable transportation objectives and we plan to continue our efforts in this area. DOT has been conducting research on TSM measures of effectiveness which should help local areas to evaluate the effectiveness of TSM projects. The size, level of effort and scope of the evaluation should be comparable to the size and scope of the project. [See GAO note 4.]

(2) MPOs Ability to Coordinate

GAO recommendation:

To promote coordination of the urban transportation planning process, the Secretary of Transportation should require FHWA and UMTA not to approve an urban area's planning process until the area has shown that the plan (1) is an overall unified plan for the urban area resulting from a coordinated process, and (2) includes input from those groups or agencies that provide or are affected by the area's transportation plan.

GAO points out that MPOs do not have sufficient authority to require that coordinated TSM projects be implemented and must rely largely on persuasive powers. When the joint planning regulations of UMTA and FHWA were promulgated in 1975, the basic idea was to forge a more effective link between planning and programming. This was seen as the biggest flaw in the process and we needed an agent with the broadest perspective to put the "juggling" act together. The MPO's were established as the forum for cooperative decision-making by principal elected officials of general purpose local government. It was not intended that the MPO be the implementor of all the follow-on action; rather, that it be the synthesizer of many elements. We are quite conscious of the danger of overloading a fragile mechanism. We agree, however, that it must involve all the appropriate players and then add something of its own: the regional or comprehensive perspective. We believe this can best

be achieved through continued development of this process rather than through confrontation.

(3) Impediments to TSM Project Implementation

GAO recommendation:

Request funding for section 4(i) of the Urban Mass Transportation Act, as amended, to test whether financial incentives would be effective in promoting more widespread adoption of innovative TSM projects. Monitoring and evaluation should be required for all projects supported with these funds. If funding proves to be an incentive, then determine whether additional legislation is needed to provide incentives for projects involving more than mass transit.

Continue to work with other Federal agencies to eliminate existing Federal laws, regulations and policies that hinder ridesharing and demonstrate the Department's commitment to the TSM concept.

TSM projects, including innovative projects, can be funded under current highway and transit programs, thus the Department did not request separate funding of section 4(i) for FY 1980. We are in the process of reexamining this program in the context of our review of the FY 1981 transportation budget and the recommendation contained in this report.

Innovative TSM techniques have been developed under UMTA's Service and Methods Demonstrations; others were done jointly by UMTA and FHWA under the Urban Corridor Demonstration Program, and some have been developed completely through local initiative. The more innovative local areas are now adopting these techniques.

These new techniques and methods can be grouped into several major categories such as High Occupancy Vehicle Priority, Paratransit, Special User (Elderly & Handicapped) Transit, Economic Incentives and Disincentives, Human Resources, Marketing, Operations and Maintenance. Several noteworthy examples can be cited: the contra-flow bus lane on the approach to the Lincoln Tunnel (New York), the Shirley Highway Busway (Washington, D. C.), the El Monte Busway (Los Angeles), an automated system for assigning bus drivers to their work that has been used in Syracuse, Seattle and San Francisco, computerized traffic signal systems which are now in operation in over one hundred cities, carpool and vanpool projects, fringe parking lots for park and ride facilities, pedestrian malls and bicycle facilities and pathways.

The report identifies a number of hinderances to implementing ridesharing, some of which require legislative authority. The recommendation, however, is limited to requesting DOT to continue working with other Federal agencies to eliminate hinderances to ridesharing. [See GAO note 4.]

GAO notes:

1. The Department said that the report did not fully recognize the subtleties of the planning requirements and the framework in which the joint planning regulations were developed. The Department should be commended for its efforts in promulgating the regulations. However, potential benefits will not be realized unless the Department takes additional steps to make certain that urban areas carry out the regulations more fully.

2. The Department stated that the report did not mention its alternative analysis regulations for major urban mass transportation investments that require urban areas to consider alternative investment strategies in order to determine which investment best serves the locality's needs and goals and supports national goals and objectives. The Department pointed out, and we concur, that this requirement reinforces its commitment to TSM. The alternative analysis requirement was the subject of another GAO report entitled "Communication and Management Problems Hinder the Planning Process for Major Mass Transportation Projects," (CED-79-82, June 5, 1979.)

3. The Department pointed out that our recommendations focus almost exclusively on Department actions, although (1) the regulations require close cooperation of the Federal Government and local State governments in order to be effective and (2) additional legislative authority may be needed to remove the barriers to implementing certain TSM projects. We believe that because the Department initiated and is responsible for administering the regulations, it should assume the lead in taking those actions needed to make the regulations effective. We believe that the Department should first take those steps within its existing authority to improve the effectiveness of the regulations, and then determine what additional authority it may need to further improve their effectiveness. With respect to the barriers issue, the Congress is considering revisions of the tax laws which could affect the implementation of certain TSM actions. (See p. 40.) The other barriers mentioned in the report could be handled administratively by the Federal departments or agencies involved.

APPENDIX III

4. Reference to the Department's ongoing efforts is no longer included as part of the recommendations. It is included, however, as part of the chapter's conclusion.

(345500)

AN EQUAL OPPORTUNITY EMPLOYER

UNITED STATES
GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

POSTAGE AND FEES PAID
U. S. GENERAL ACCOUNTING OFFICE


THIRD CLASS